DOCUMENT NO. 212
Invertebrate Paleontology
Yale Peabody Museum
7041

Stop 1. Crossmans clay pit

South Amboy clays at base and the sand member overlying. Dorf says these units deltaic - likes to think of them as Hudson delta - thin southward where indistinguishable from Magothy.

Details - This upper 2 pts of unit which in wells nearby is 300'. Both sand & clay ss

Stop 2. Cliffwood beach. -

Magothy - alternating unconsolidated ss and clay. Some thicker carb clay near base. - Crabs + other shells. Some fossil leaves in lower clays. Pyritized wood, conifer cones. Inverts in laminated ss layers. Some mineralization at top. Sand in Magothy similar to Raritan — clay more illitic micaceous.

Stop 3. - Top is Beacon Hill? Gravel + ss,

White ss - Vincentown?
Green sand - much weath. Hornerstown
Much weath. Tinton.

Only fossils some internal casts Exogyra in
supposed Tinton. Top Tinton here shows
tendency to spheroidal weathering.

Stop 4 - Sampled the lower member of the
Red Bank which can be seen here
in sharp contact with upper memb.

Stop 5 - Coll. from weathered Tinton

Stop 6 - Foram samples as marked. The
Mt. Laurel in contact with the
Navesink. Supposed Red Bank at
top but may not be. Am confused
by indefinite nature of sequence
breaks & changes and definite
Stratig. nomenclature. Could old
nomenclature be too complex to
use in practice?

2nd day. — Stop 1. Looked for cephs. Fragment of baculite given me by Drake. He also mentioned a Maryland locality with abundant Sphenodiscus with shell material. Collected only the Choristothyris as we have ample of other stuff.

Stop 2. Here the 'black' Red Bank overlies Navesink. Coll. from shell bed in Navesink - big Exogyras and Gryphaeas, Belemnitella and others. Kept a large Exo for Forams in its fill. The fossils are packed amazingly, one set within the other. Matched valves very rare. Some phosphatic nodules in this section near the supposed Navesink-Red Bank contact.

Stop 3. Hornerstown - ~~Farber~~ Lower Red Bank? contact. Sphenodiscus found in darker glauconitic sand of ~~Hatton~~ L. Red Bank. - ~~which resembles the Red Bank.~~ Critical locality which demonstrates that spheno-bearing beds - presumably ~~Hatton~~ L. Red Bank but could be ~~Red Bank~~ Tinton - continues of New Egypt. The Rickards - Stark Geology school holds to old belief that these do not occur south of New Egypt.

Problems in local stratigraphy seem to included following -

1. Differentiation of weathered from unweathered strata. i.e. Belief that Tinton steps in New Egypt area may be based on its ident. by weathered characteristics N. New E.

2. Is old terminology practical? Should not Tinton - Redbank (~~possibly Navesink~~) be one unit with local sand bodies lentils or members? Same for Mt Laurel - Navesink?

At step 3 — what prevents the lower dark bed from being Tinton? Seems to me it should be called Tinton at least provisionally.

Step 4 - Type Hornerstown — numerous shark teeth found by party.

Step 5 -
Step 6 ~~4~~ (7) — not visited?
Collected some good Glenocthyris

Hornerstown — Vincentown. an excellent gradation with the beds of accumulated bozchs + gryphaeas ~~preceding it~~ spaced at short intervals. ~~through~~

~~the lithologic change~~ Top biostrome is taken as top of Hornerstown, Greensand + fragments Hornerstown fossils reworked in lower part Vincentown. Looks like a gradation to me.

Stop 8. — Sand that is supposed Vincentown

Stop 9. - Birmingham pit Hornerstown. — Not much left to be had here except by sieving.

Stop 10. Type Vincentown